

102. *Humilogriffithides*, a New Ally of *Griffithides*.

By Yutaka INAI.

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Trilobite remains are not common in the Upper Carboniferous deposits of South Manchuria, and the material now at hand, though not quite good in preservation, is the best one collected by the writer during his many years' search for fossils in the Carboniferous districts. It is a piece of limestone bearing several individuals of trilobites on its weathered surface, of them some are almost complete and others fragmental. All of them apparently belong to one and the same species of a new genus closely allied to *Griffithides*.

Family *Proetidae* Barrande, 1852.

Genus *Humilogriffithides*, gen. nov.

Genotype:—*Humilogriffithides divinopleurus*, sp. nov. Monotypic at present.

Humilogriffithides divinopleurus, sp. nov.

Figs. 5-10.

Cotype:—Preserved in the collection of the Institute of Geology and Palaeontology, Tôhoku Imperial University, Sendai, Japan. Reg. No. 59753.

Diagnosis:—

General form oblong.

Cephalic shield nearly semi-elliptical, convex, but not much inflated, as high as one-third of length, almost smooth?. Glabella elongate-pyriform, convex, somewhat overhanging frontal margin of shield; frontal lobe large, oval; lateral furrows 1 or 2, faint; basal lobes convex, lengthwisely elongate trigonal with rounded margins, defined by shallow furrows from the rest of glabella. Occipital ring narrow, convex, occipital furrow distinct. Eyes close to glabella, moderately large, lunate; palpebral lobe rather broad. Facial suture forming an acute angle with circular border of free cheeks at frontal margin of glabella and running oblique across the lateral portions of occipital ring. Marginal border of free cheeks narrow, genal angles more or less produced but not much extending behind occipital ring, obtusely pointed.

Thorax roundly arched, consisting of 8 or 9 smooth and well defined segments. Axial part somewhat broader than the lateral lobes in first segment, thence gradually narrower posteriorly. Axial part distinctly marked off from the lateral lobes by axial furrows.

Pygidium semi-elliptical in outline, convex, with rounded plain border; axis prominent, rounded on summit, distinctly marked off from lateral lobes, composed of 13? coalesced segments; lateral lobes bearing 8 ribs which die out before reaching very margin, leaving there a

smooth border, and are ornamented with slightly elevated minute granules in two rows, one on each side of a narrow median furrow.

Dimensions of specimens (in mm.):—

	Specimen I (in Fig. 10)	Specimen II (in Fig. 10)
Total length	27.0	28.0
Width	13.5	14.0
Length of Cephalon	9.0	9.0
Width of Cephalon	13.5	13.0 (compressed)
Length of Glabella	7.5	8.0 ?
Basal width of Glabella	7.0	?
Length of Thorax	8.0 (compressed)	10.0
Mean width of Thorax	12.0	12.0
Mean width of Axis	5.0	5.0
Mean width of Pleurae	3.5	3.5
Length of Pygidium	9.0	9.0
Width of Pygidium	12.0	12.0 ?
Width of Axis along frontal margin	4.0	4.5
Width of Pleurae along frontal margin ...	3.8	3.6

There are two allied genera to be brought into comparison with the present one, they are *Griffithides* Portlock,¹⁾ 1843 with the genotype *globiceps* (Portlock) and *Neogriffithides* Toumansky,²⁾ 1935, with the genotype *gemmellaroi* Toumansky. *Griffithides* is characterized by semioval cephalic shield, as high as two-thirds of length, pyriform convex glabella with nearly circular frontal lobe and quite free from lateral furrows, basal lobes sharply defined from the rest of glabella and moderately elongated antero-posteriorly, rather small eyes, moderately broad palpebral lobes, free cheeks with broad marginal border and genal angles extending much behind the occipital ring and produced to spines. *Neogriffithides* on the other hand is marked by semi-circular cephalic shield, nearly as high as two-thirds of length, pyriform glabella with ovate frontal lobe and 3-4 faint lateral furrows, not much elongated basal lobes sharply defined from the rest of glabella, rather small eyes, broad palpebral lobes, and free cheeks with broad marginal border and rounded genal angles somewhat extending behind the occipital ring. The present form differs from *Griffithides* by less inflated cephalon with narrower marginal border, narrower glabella and shorter basal lobes, larger eyes, and free cheeks bearing genal angles not much extended behind occipital ring; and from *Neogriffithides* by less inflated cephalon with narrower marginal border and narrower glabella, larger eyes and free cheeks bearing genal angles. No other genus and species showing closer affinity, are aware to the writer.

Locality:—North of Ma-i-tsun-kou, 5 km. west of Pen-hsi-hu, Pen-hsi-hsien, Feng-tien Province, Manchoukuo.

1) J. E. Portlock (1843), Report on the Geology of the County of Londonderry and Parts of Tyrone and Fermanagh. H. Woodward (1883-4), A Monograph of the British Carboniferous Trilobites.

2) O. Toumansky (1935), The Permo-Carboniferous Beds of the Crimea, part II, The Permo-Carboniferous Trilobites of the Crimea.

Geological formation:—The second limestone from above in the Upper Carboniferous Hsiao-shih series of the Tai-tzu-ho System of the writer.¹⁾

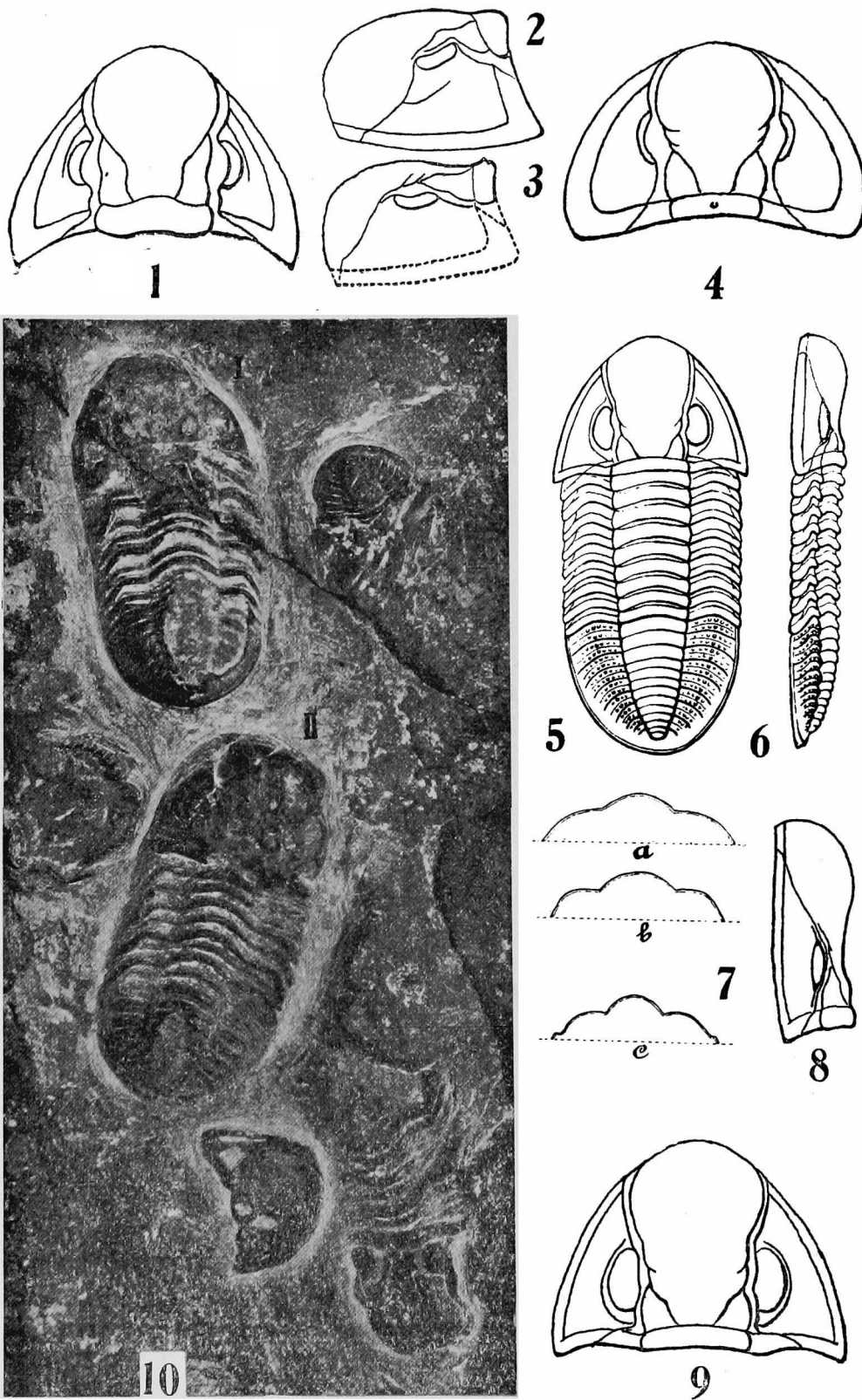
Finally the writer wishes to acknowledge his warmest thanks to Prof. H. Yabe of the Institute of Geology and Palaeontology, Tôhoku Imperial University, for kindly correcting and making possible the publication of this article.

Explanation of Figures.

1. Outline of cephalon of *Griffithides globiceps* (Portlock), $\times 2$.
2. The same, left side, $\times 2$ (after H. Woodward).
3. Outline of cephalon of *Neogriffithides gemmellaroi* Toumansky, left side, $\times 2.5$.
4. The same, upper side, $\times 2.5$ (after O. Toumansky).
5. Restoration of *Humilogriffithides divinopleurus*, sp. nov. $\times 2$.
6. The same, left side, $\times 2$.
7. Profiles of the test of *Humilogriffithides divinopleurus*, sp. nov. (a) basal part of cephalon; (b) front of thorax; (c) front of pygidium.
8. Outline of cephalon of *Humilogriffithides divinopleurus*, sp. nov., left side view, $\times 3$.
9. The same, upper side, $\times 3$.
10. *Humilogriffithides divinopleurus* sp. nov., on the weathered surface of limestone.

1) Y. Inai (1935), Contr. Inst. Geol. Palaeont. Tôhoku Imp. Univ., in Japanese Language, No. 13. The limestone is rich in fossils and K. Ozaki once recorded from it *Spirifer fasciger* Kayserling, *mosquensis* Fischer, cfr. *nikitinii* Teschern., *Enteletes lamarchi* Fischer and many other brachiopods.

K. Ozaki (1931), Upper Carboniferous Brachiopods from North China, Bull. Shanghai Sci. Inst., Vol. 1, No. 6.



Kimura Photo. and Inai del.